

CLAIMS

What is claimed is:

1. A method, comprising applying a morphological operation to an SEM image to obtain a idealized image, and using the idealized image to detect a defect in a subject of the SEM image.
2. The method of claim 1, wherein details of the original image are removed in the idealized image.
4. The method of claim 1, wherein the defect is detected by image comparison between the SEM image and the idealized image.
5. The method of claim 4, wherein the image comparison comprises subtraction such that an image obtained after the morphological operation reveals only details that have been removed by the morphological operation.
6. A method, comprising applying a sequence of morphological operations to an image, the morphological operations making use of structuring elements that match or do not match some morphological properties of a pattern present in the image, and detecting defects in a subject of the image as a consequence of some of said patterns being modified by the morphological operations while others are not.
7. A method, comprising applying a morphological operation to an SEM image to obtain a idealized image, and using the idealized image to enhance a feature of a subject of the SEM image.
8. A method, comprising applying, as an image preprocessing operation, a morphological operation to an SEM image to obtain a resulting image that is a modification of SEM image in which a defect in a subject of the SEM image is more easily detectable than in the SEM image.
9. A method, comprising detecting a small particle located in a uniform background of an image by defining a seed point in each part of the image that needs to be inspected, growing a flow from each seed point by merging pixels which satisfy specified conditions about their similarity, and creating a map therefrom.

10. The method of claim 9, wherein a hole in the map is used to identify an irregularity in a texture of the inspected part of the image.
11. A method, comprising performing object segmentation on an image that includes a large number of assumed to be identical objects to create a segmentation map, defining specific areas of interest relative to the segmentation map, for each such area performing a measurement, and determining whether or not any of the objects in the image reveal defects in the subject of the image according to whether or not the observed measurements are statistically anomalous.
12. A method, comprising applying a morphological operation to an SEM image to obtain a idealized image, for each object in the image that needs to be analyzed for separation defining a seed point and growing said seed points until they meet.